

## RegCM4.6 Simulations for the CORDEX Australasia Domain

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Although there are increasingly various studies within the frame of CORDEX initiative, most of these studies mainly focus on the domains of Africa, Europe, and the Mediterranean. Therefore, this study presents the regional climate simulations for the CORDEX Australasia domain using the actual version of RegCM. Projected changes in merely mean temperature and precipitation climatology during the periods of 2011 - 2040 (near-term), 2041 - 2070 (mid-term), and 2071 – 2100 (long-term) with reference to the period of 1971 – 2000 are investigated for the CORDEX-Australasia domain via regional climate model simulations. All of the simulations are employed by using the best parametrizations suggested in the evaluation part of the study. The outputs of two global circulation models (i.e. HadGEM2-ES of the Met Office Hadley Centre, MPI-ESM-MR of the Max Planck Institute for Meteorology) is dynamically downscaled to 50 km under two different Representative Concentration Pathways (RCPs), namely RCP4.5 and RCP8.5. In this respect, seasonal changes in temperature and precipitation climatology of the CORDEX Australia domain is analyzed in a high resolution.

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